

Claims

1. Roll-over protection device for a motor vehicle, particularly for a convertible, comprising a roll bar (2), that is provided with an at least nearly U-shaped design having a transverse yoke (3) and lateral limbs (4A, 4B), while leaving a loading opening (11) unobstructed and extending such that it essentially spans the width of the vehicle. The lateral limbs (4A, 4B) can be displaced along fixed guiding devices (6, 7, 8) in order to transfer the roll bar (2) out of a lowered non-operational position into a raised supporting position, characterized in that

a central retaining and activating device (12) is provided for the roll bar (2), said device being controlled by an actuator (18) and/or a device (17) that synchronizes the displacement of the limbs (4A, 4B) of the roll bar (2) along the guiding devices (6, 7, 8) is provided.

2. Device pursuant to claim 1, characterized in that the transverse yoke (3) and the limbs (4A, 4B) of the roll bar (2) are designed as a single piece.

3. Device pursuant to claim 1 or 2, characterized in that the synchronizing device (17) is provided with a synchronization shaft (20) that is mounted fixedly parallelly to the transverse yoke (3) and is connected to each of the limbs (4A, 4B) by means of a tooth profile

(21) that meshes with a notched strip (22) that is arranged on the assigned limb (4A, 4B).

4. Device pursuant to any of the claims 1 to 3, characterized in that the central retaining and activating device (12) is arranged in a cross bar (13, 13') that stretches essentially parallelly to the transverse yoke (3) of the roll bar (2) in the installation position above the loading opening (11).

5. Device pursuant to any of the claims 1 to 4, characterized in that the central retaining and activating device (12) comprises a retaining plate (19) that is arranged on the roll bar (2) in an area which is at least nearly the center of the width of the vehicle and that is in mesh with a fixedly mounted engaging element in the non-operational position of the roll bar (2).

6. Device pursuant to claim 5, characterized in that the central retaining and activating device (12) comprises an engaging element that is fixedly mounted on the cross bar (13, 13') and that is controlled by the actuator (18) and is in mesh with the roll bar (2) in the non-operational position of the latter.

7. Device pursuant to any of the claims 1 to 6, characterized in that a spring drive mechanism is provided as the drive in order to transfer the roll bar out of a non-operational position into a raised supporting position, whereby said

spring drive mechanism comprises at least one compression spring that acts on one limb of the roll bar and is compressed in the non-operational position of the roll bar.

8. Device pursuant to any of the claims 3 to 6, characterized in that a drive element (23) is provided as a drive in order to transfer the roll bar (2) out of a non-operational position into a raised supporting position, whereby said drive element engages at the synchronization shaft (20).

9. Device pursuant to claim 8, characterized in that the drive element is a spring (23) that is pre-stressed in a twisted form in the non-operational position of the roll bar (2) between the synchronization shaft (20) and a fixed point (24) and sets the synchronization shaft (20) in rotation when the roll bar (2) is released.

10. Device pursuant to any of the claims 4 to 9, characterized in that the cross bar (13, 13') is arranged between fixedly held guiding devices (6; 7) of the limbs (4A, 4B) of the roll bar (2).

11. Device pursuant to any of the claims 4 to 10, characterized in that the cross bar (13, 13'), the guiding devices (6, 7, 8) connected to the former and the roll bar (2) form a pre-mountable module.

12. Device pursuant to claim 11, characterized in that the pre-mountable module comprises a torsion profile (15) that extends in the vehicle transverse direction in the installation position above the loading opening (11) and can be connected tightly to the vehicle body whereby the roll bar (2) is inserted through said torsion profile in the pre-assembled state.